

The wooden architecture of houses of ancient Russia in XII-XIX century

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In Ancient Russia the most common type of wooden buildings was a house. Its constantly updated architecture gave rise to all existing constructional and compositional techniques of Russian wooden architecture. I. V. Makovetsky wrote on this subject: «Here the basic principles of constructing harmonious architectural forms were formed. Here a solid foundation evolved for carpentry art, allowing national artists freely and safely realize their building conceptions».

Let us consider the basic types of residential wooden houses that were formed on the territory of ancient Russia. These types of houses are mentioned in historical documents and survived from the second half of the XVIII century until present. (pic.1)

The simplest type of Russian peasant house was *izba-chetyrehstenok*. The *izba* consisted of residential *crate orkleti* and small *inner porch seni*. Such buildings (without household premises) were typical for poor peasants families who owned horses and cattle. The *izba* was set on a high *podkleti (basement)*. This basement was used for household needs in order to isolate the house from the damp soil in spring and to accumulate snowdrifts in winter. Living crate and inner porch were cut out of pine logs with the grooves stuffed with moss. From the inner side the timberlogs were smoothly hewn. The log decking served as a ceiling, was lubricated with clay and covered with soil. The floor was made from planks fitted together. The *izba* living space was organized in the following way. In one corner a wooden platform with a wooden box named «*golbets*» was mounted near the adobe oven. The *golbets* concealed the stairs leading to the basement. In the opposite corner (the most lit one or "red" corner) a dining table and a *shrine* were placed. There were benches along the walls as well. A cabinet-table was fixed opposite the mouth of the oven. It was used for cooking and storing of various household items and glassware [1]. Russian furnace was an essential part of every house due to its versatility. The high heat capacity ensured its even heating during the day. Due to furnace construction hot food and water were hot for a long time. Moreover, it was used to warm and dry clothes. In the wintertime it was the best place for sleeping. People slept on a *polati* that was placed near the stove.

A house from the village Vogulka (Alapayevsky rayon) can serve as a good example of the *izba-chetyrehstenok* (Pic. 2).

The cottage demonstrates the manor of a middle-class peasant. In the izba **solid seni** remained, chopped «*in the paw*». However, **basement logs** were renovated during the replacement of roofing in a manner of the West and the East Siberian wooden architecture. Thus **kuritzi** and **ohlupen** together were decorated by threa **dprichelini** and **polotenz** belonged to the later type and had not been typical to an authentic izba. The windows of this remarkable construction remained its historical value and are decorated with carved ampere architraves. The craved ornament is named «sun». It is typically was done on the frieze board and on the inside of the shutter. This motive had an immense influence on the development of the Ural folk painting. It is worth mentioning that the frames of the main facade as well as the inside interior were painted by the guest artist from Yekaterinburg I. Ryzhov [2].

In further development of the izba-chetyrekhshtenok the appearance of house holding crate on the other side of the inner porch was very specific. It was followed by the appearance of the covered yard. High **podklet** was arranged under the residential part of the house and under the administrative part enabling to keep cattle on the ground floor. The upper floor was arranged as a storage space for depositing hay and various farming equipment.

The izba-pyatistenok is a final result of the transformation of izba-fourthside with a porch. The Izba-pyatistenok was a residential building consisting of two adjacent rooms, separated by a wall. The fifth wall of the residential part is separated from the house (with oven) and an **gornitsa** with a separate entrance from the porch on the other side of which the courtyard is covered. The izba was lit by two **cant** («red») windows and one **volokovoye** window (sash window), the **gornitsa** – three «red» windows. The appearance of this type of the izba became widespread; it was caused by a necessity to increase the area and the amount of space for a peasant family.

The most advanced types of peasant houses were created in the Russian North, as farmers of northern regions, escaped serfdom, had stronger economy and a sufficient number of timber. All this has also contributed to the development of folk art.

Another common type of dwelling house, the appearance of which archaeologists attribute to the line XI-XII centuries, is the izba-shestistenok, thus combined under one roof two adjacent log related porches and a covered way. The izba consists of three residential buildings overlooking the main facade. Across the courtyard the entrance hall with two stands is. The whole complex is placed on a high basement and covered with a common roof. The porch is covered, standing on a post, on the second floor of the courtyard – the ramp.

Widespread were sixth side houses in XVIII-XIX centuries and the Russian North – in the basins of the Northern Dvina, Onega and Mezen.

Naturally ventilated space between the two izba's housing made more durable. Increasing the distance between frames allowed to create extra room in the house: first, the cold lumber room, and later the room [3].

Centuries of experience in building Russian carpenters helped to develop and perfect the design of the so-called witty tack less («*samtsovaya*») roofs of houses, all parts of which are mounted without the aid of expensive iron (Pic. 3).

Supporting elements of the roof – horizontal slegs – are cut into logs («*samtsu*») gable houses. They laid felled by the roots (butt end down) thin spruce – «chicken». At the bottom, curved, root end chickens fit flow, which the plant in the groove bottom ends battens roof. "Flow" water collected from the roof and cantilever offsets takes it as far as possible from the lower rims of the house. Upstairs joint battens covered ohklupen is attached to the ridge sleg down wooden rods. The inboard end of ohklupen is completed by decorative head of a horse or a bird.

To prevent the leakage of the battens on the roofs it was laid into two rows with a ligation and paved with the birch bark. The ends sleg down, looked out on the facades were covered with prichelins, which closes the joint between the vertical carved board («*towel*»). This construction of the roof was solid and did not need frequent repairs [4].

Equally ancient forms of residential construction homes are at home, «glagol» and «koshel» which became widespread in Karelia (Zaonezhie), Belomorye, lower reaches of the Pechora and Kama. Both types – the search result more compact housing solutions with maximum thermal capacity. In the izba, «glagol» residential and economic part of the diagonally were placed under one but asymmetrical gable roof. Vulnerabilities of this arrangement were two internal angles conducive to excessive cooling and snow drifts. These deficiencies deprived house «koshel».

In the house of this type of arrangement different residential and business units are fundamentally. a large courtyard became adjacent to the residential izba on the side, in contrast to previous homes in which residential and shopping parts arranged one after the other – along the longitudinal axis. The courtyard and the cottage were placed under one extremely compact asymmetrical gable roof, forming a square shape in the plan that should ensure the maximum heat capacity of the house.

These types of houses in each region acquired individual characteristics. Even within the region at the same traditional pattern layout a variety of common proportions, carved details and paintings could be observed that adorn the eaves overhangs, gables and balconies lower plane. The basic principle of folk architecture – the uniqueness of each structure in the repetition of its elements – was due to the constant contact with nature that did not tolerate repetitions. This task was able to solve, despite the fact that the funds were very limited: timber, beams, planks, later carvings.

Somewhat different climatic conditions and a gradual decrease in forest areas in central Russia led to changes in the overall size of the cottage and construction of the roof of Central Russian house.

By the 80s of XIX century the height of the roofs was reduced, trusses were more appropriate to urban type; prichelins covering the ends

slegdisappeared from the roofs. The front board is now sewn to the ends of the upper crowns log and sets in the lateral facades. Thread appears on the cornice and carved decoration often fills the entire field of the pediment. Still later slope with four entresolsappeared on the roof.

Degree ornaments of the izba thread depend on the financial possibilities of the owner. If the owner was not constrained by the costs, then the masters opened a wide scope of activities and they created masterpieces of art carved, showing a sense of proportion and artistic tact, cleverly using the texture of wood. More impressive variety of subjects thread – Empire style from recycled vegetable motifs and patterns to an entire gallery of fabulous creatures from another pagan beliefs [5].

Glossary

Podklet– lower (typically uninhabitable) floor of a wooden house.

Battens – sawn boards, thinner inches (4.4 cm) on the roof huts.

Cant window – a window frame, framed by jambs. Window decorated with wooden carvings and plenty of natural light.

Chicken – rafter from spruce roots treated with a hook.

Crate – indoor rectangular one-room log house with no simple constructions (frame).

Flow – tackless part of the roof structure, horizontally mounted timber with a slotted it into the gutter, which about the lower ends of the roof planks.

Glagol – type of house, the plan has the form of the letter "L", the economic part covers living on both sides. The roof of the total, asymmetrical.

Golbets – design with furnace rises in the oven and polat, and the descent into the basement

Gornitsa – net half a peasant's hut.

Isba– wooden peasant house in Russia.

In the paw – joining method logs angles at which the ends of the logs do not extend beyond the outer wall plane.

Inner porch – between the living room and the porch of the house.

Koshel – type of house, which is close to the plan outlines square: the residential part is placed parallel to the business, close to her. The roof of the total, asymmetrical.

Ohlupen – ridged bottom timber with a selected groove (V-shaped in cross-section).

Podkuretnoe timber – the third log consoles (at the base of the pediment), serves as a support for the chickens.

Polat – wide bunks for sleeping, arranged in the houses near the ceiling between the furnace and the opposite wall.

Prichelina – carved gable boards. Prichelina covers the ends of the plank roof came down.

Samets – timber gable. Males are a continuation of the wall, from the crown to the crown they are shortened, which allows us to give the outline of a triangle gable.

Shrine – regiment or kiot icons.

Sleg – a long thick pole.

Towel – short carving board, covering the joint prichelin.

Volokovoyoe window – a small rectangular window, the height of the diameter of the timber frame, 0.5 meters in width to.

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Chapelle de Sainte-Catherine la Grande – un symbole d'Ekaterinbourg

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Une des curiosités de la ville d'Ekaterinbourg est la chapelle de la Sainte Catherine martyr. Elle se trouve sur la place de Travail, à l'emplacement de l'ancienne église de la Sainte – Catherine-de-céleste patronne de la capitale de l'Oural et de l'exploitation minière. Elle a été construite en 1723 lors de la fondation de la ville, et s'est ouverte aux membres de la paroisse en 1726. En l'honneur de la sanctification de l'église sur l'ordre de Guillaumed de Guenine on a produit trois volées de onze coups de canon urbaines à bastions et à partir de ce moment les ingénieurs– spécialistes en industrie minière ont commencé à donner le serment dans le temple de la Sainte – Catherine.

A cette époque la ville a été en train de se développer, donc ce bâtiment est devenu l'un des principaux objets d'architecture. Six mois plus tard, l'impératrice Catherine I a transmis au temple son cadeau royal: vêtements sacerdotales de cérémonie, la gamme complète des livres liturgiques et les ustensiles d'argent de l'église.